

First record of breeding Boreal Owl *Aegolius funereus* on Bamyan plateau, Afghanistan

SAYEED NAQIB MOSTAFAWI, MOHAMMAD, GHULAM HASSAN, ALBERT DRIESCHER & STÉPHANE OSTROWSKI

The full extent of Boreal Owl's *Aegolius funereus* range in Asia has not been documented (Koopman *et al* 2005) but it seems that south of the Asian boreal forests the species survives in isolated populations, as supported by the handful of documented breeding records in India, Pakistan, Kyrgyzstan and Tajikistan (Koopman *et al* 2005). However, because the species is nocturnal and commonly found at relatively high elevations in remote habitats where fewer scientific surveys are conducted, it is possible that the species might be more widespread in the central Asian highlands than reflected in the current literature.

On 24 June 2018 in the morning (c10.20) during an ornithological survey in Chapchal canyon (c 35° 20' N, 67° 14' E) in the northeast of Bamyan plateau, Bamyan province, central Afghanistan, we observed a small whitish-spotted dark chocolate-brown owl flying from rocks to shrubs and producing alarm 'keek, keek, keek' calls. The bird was not shy and we observed it for more than 15 minutes and photographed it. It had an overall dark brown coloration and the primaries and secondaries had whitish round spots. The tail was dark brown with three visible bars of whitish dots. Underparts were whitish with brown streaks. The head and neck were dark brown with a rather square facial disk surrounded by dark brown down feathers and iris colour of eyes was yellow. We identified it as a juvenile Boreal Owl. Lars Svensson (pers comm 7 July 2018) confirmed the identification from a photograph (Plate 1).



Plate 1. A juvenile Boreal Owl *Aegolius funereus* in Chapchal canyon 24 June 2018, Bamyan plateau, Bamyan province, Afghanistan.



Plate 2. This picture of the Boreal Owl *Aegolius funereus* in Chapchal canyon, Bamyan plateau, Bamyan province, Afghanistan 24 June 2018, shows the brownish soft feathering with mesoptile feathers still covering wing coverts, as in recently fledged (4–6 weeks-old) specimens (Cramp 1985).

The Bamyan plateau is a c54 000 km² mountainous landscape in the central Hindu Kush range of Afghanistan. The terrain is mostly arid and very remote with precipitous peaks rising to 4200 m interspersed with gently rounded, vegetated mountaintops up to 3200 m in elevation. The Boreal Owl was found at an altitude of 2963 m (GPS hand held unit) in the bottom of a deep canyon with cliffs more than 150 m high (Plate 3). The vegetation of the canyon was composed of grasses and canyon-bottom shrub communities including *Lonicera bracteolaris*, *Rosa beggeriana*, *Ephedra major* and 1–3 m tall *Ribes villosum* bushes on which the bird was occasionally seen roosting. Scattered *Juniperus excelsa* trees grew on rock walls. Although the habitat used by the observed owl in Bamyan is remarkably different from the species' typical habitat normally characterized by rather extensive boreal, temperate or subalpine forests (mostly coniferous) of aged trees, its habitat in Bamyan seems relatively similar to the 'subalpine juniper scrubs and stunted tree' habitat described for the nearest known record located c700 km to the east, in northern Pakistan, where a single calling male was recorded in February 1986 (Grimmett *et al* 2008). The elevation is allegedly the highest so far reported for the species in Asia (König & Weick 2008).

The bird was in brown soft feathering, still had some mesoptile feathers on wing-coverts, head and body (Plate 2) and was observed often resting and calling from the ground, we concluded that it was recently fledged, estimated at 4–6 weeks old, and probably still dependent on the adult for food (Cramp 1985, Korpimäki & Hakkarainen 2014).

In a recent telemetry study in the Orel mountains, Czechia (Czech Republic), Boreal Owl fledglings became independent at 7–9 weeks of age between 5 July and 3 August and had by then dispersed a maximum of two km from the hatching site (Kouba *et al* 2013). Although post-natal dispersal of Boreal Owl is known to vary in spatial extent according to different factors and particularly food availability, to our knowledge the maximum-recorded dispersal distance from hatching site by age of independence was 21 km for one individual (Vikström 1988 in Korpimäki & Hakkarainen 2014). Based on the age estimate and available knowledge on post-natal dispersal in Boreal Owl in Europe we believe that the bird was native to the Bamyan plateau.



Plate 3. The habitat of the recently fledged Boreal Owl *Aegolius funereus* in Chapchal canyon, Bamyan plateau, Bamyan province, Afghanistan, 24 June 2018.

This is the first record of the species in Afghanistan and probably the southwestern-most record for Asia. As the only known breeding site for the species in Afghanistan, Bamyan plateau is of national importance for the species' conservation.

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- Ghulam Hassan, Albert Driescher & Stéphane Ostrowski, Wildlife Conservation Society, Afghanistan Program, Kabul, Afghanistan. sOstrowski@wcs.org